

REMARKS

The pending office action addresses claims 1-7, rejecting all claims. Specifically, claims 1-7 are rejected as being obvious over Jacques (French Patent No. 2 801 492), in view of Vignaud et al. (U.S. Patent No. 5,176,680), and further in view of Schlapfer et al. (U.S. 5,501,684). By this amendment, claims 1-3 are amended to correct minor grammatical and syntax errors in order to better clarify and define the claimed invention. Accordingly, no new matter has been added by this amendment.

For all of the following reasons, Applicant respectfully requests reconsideration of the application and withdrawal of the current rejections over claims 1-7.

Rejections under 35 U.S.C. §103

The Examiner rejects claims 1-7 under 35 U.S.C. §103(a) as being unpatentable over Jacques (French Patent No. 2 801 492), in view of Vignaud et al. (U.S. Patent No. 5,176,680), and further in view of Schlapfer et al. (U.S. 5,501,684). Specifically, the Examiner alleges that Jacques discloses a vertebral arthrodesis device substantially as claimed. According to the Examiner, Jacques discloses a vertebral arthrodesis device comprising a pin (5), an anchoring part (6), a cavity (11) to receive the pin, the head of the anchoring part having two lateral threaded holes, the cavity snapping onto the pin (5) due to perpendicular flexing of the inward pointing slots in the head of the anchoring part, the

head of the anchoring part extending perpendicular to the top opening of the cavity, and tightening means (4) which overlaps the pin and clamps it down into the anchoring part with two lateral holes that correspond to the two in the anchoring part. However, Jacques fails to disclose lateral undercuts to allow pivoting, a ring placed along the pin, and a cavity capable of securing the pin (spinal rod) with a ring about it.

To cure the deficiencies in Jacques, the Examiner combines this reference first with Vignaud et al., then with Schlapfer et al. Vignaud et al. is relied on by the Examiner for teaching a device with a bone-anchoring portion (1), a split ring (9) slidable along the length of the spinal rod (6), clamping means (7, 8, and 18), and lateral undercuts (Figures 1 and 3, the areas of parts 5 and 17). According to the Examiner, the ring and lateral undercuts allow for pivoting of the spinal rod as shown in Figure 2. Schlapfer et al., is relied on for teaching in Figure 2 a sliding ring having longitudinal cuts which initiate at alternating ends of the ring. As motivation to combine the three references, the Examiner concludes that it would have been obvious to one of ordinary skill in the art to combine Jacques with the teachings of Vignaud et al. and Schlapfer et al. to allow flexibility of the spinal rod maintaining integrity. Applicant respectfully disagrees for the following reasons.

**Jacques Does Not Substantially Disclose the Claimed
Invention**

First, Applicant disagrees with the Examiner that Jacques substantially discloses the claimed invention. As required of the claimed invention, the vertebral arthrodesis device of the present invention comprises an anchoring part for anchoring a pin to vertebrae, the anchoring part having a head shaped to delimit a cavity for receiving a spherical ring having a plurality of slots, the spherical ring allowing sliding engagement on the pin and snap-on installation to the anchoring part. Jacques, the cited primary reference, fails to disclose a spherical ring for use with the anchoring part of Jacques, nor an anchoring part which has a head shaped to delimit a cavity for receiving the spherical ring. And as the Examiner admits in the Office Action, Jacques also fails to disclose lateral undercuts to allow pivoting of the spherical ring within the cavity of the head. As stated throughout the specification, particularly at paragraph no. [0021] of the published application (U.S. Patent Application Publication No. 2005/0171538) and as claimed, the spherical ring is an integral part of the overall device assembly, allowing the possibility of snapping on the pin for adjustment of the pin relative to the anchoring part (and pivoting as allowed by the lateral undercuts) prior to securing to the anchoring part and vertebra with the tightening cap. The failure of Jacques to disclose or teach a spherical ring or any such feature for snap-

on installation of a pin to a bone anchoring part amounts to a significant deficiency of the cited reference.

There Is No Motivation to Combine the Cited References

Second, Applicant disagrees with the Examiner that any deficiency in Jacques can be cured by its combination with Vignaud et al. or Schlapfer et al. As stated above, Jacques fails to substantially disclose the claimed invention because Jacques fails to suggest or teach a spherical ring for snap-on installation of the pin to the cavity, or lateral undercuts to allow pivoting of the pin relative to the cavity.

In the Office Action, the Examiner addresses these major deficiencies in Jacques by combining this reference with Vignaud et al. and Schlapfer et al., both of which teach a bone anchoring device comprising a spherical ring for engagement with a pin. Applicant disagrees that the combination of Jacques with Vignaud et al. and Schlapfer et al. cures the deficiencies in Jacques because there is simply no motivation for one skilled in the art to do so. Contrary to the Examiner's assertions, one of ordinary skill in the art would not look to the spherical ring of Vignaud et al. or Schlapfer et al. and combine such a ring with the device of Jacques. This is because Jacques provides a screw (6) which includes wires (12, 13) for securing a pin or rod (5) within the channel (11) of the head portion of the screw (6). The wires (12, 13) twist around the rod (5), as shown in FIGS. 4-6, during the installation process, until the rod (5) is securely

and properly positioned relative to the screw (6). Then the tightening cap (7) is secured onto the screw (6), and the excess wires are clipped, as shown in FIG. 7.

Since Jacques provides wires (12, 13) as elements to facilitate proper positioning of the rod (5) to the screw (6), Applicant fails to see how one of ordinary skill in the art would be motivated to provide a spherical ring on the rod (5) for use with such a device. There is no reason for such a spherical ring to be combined with the device contemplated by Jacques. Moreover, Applicant is not convinced that combining a spherical ring with the Jacques device would still allow proper functioning and operation of the device as contemplated and disclosed by Jacques, especially if the modified Jacques device were to include both a spherical ring and also lateral undercuts to allow pivoting. Applicant does not see how the combination of the wires, spherical ring and lateral undercuts would still provide a functioning device. Simply put, the spherical ring of the present invention, which enables a snap-on installation of the pin to the anchoring part, would not be combined with the Jacques device by one of ordinary skill in the art, because there is no motivation whatsoever to do so, either within the art or within Jacques' specification.

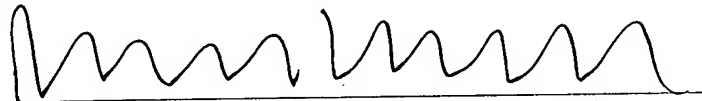
Any suggestion to combine these references would be an improper attempt at a piecemeal approach to rejecting the claimed invention. Accordingly, Applicant respectfully requests

reconsideration of the present application and withdrawal of the outstanding rejections.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON

A handwritten signature in black ink, appearing to read 'Robert J. Patch', written over a horizontal line.

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